' ONLINE BLOOD AND PLASMA DONATE FOR EMERGENCY CLINIC PATIENT

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Abstract~ This paper proposes to develop an online blood and plasma donation system using Java, HTML, CSS, Bootstrap, and SQL. The system will consist of a login and registration page for users, along with two modules for blood and plasma donation. The purpose of the system is to facilitate the process of finding suitable blood and plasma donors for emergency clinic patients. The system will be built using Java for the backend logic, HTML and CSS for the user interface, Bootstrap for responsive design, and SQL for database management. The login and registration page will allow users to create an account and log in to the system securely. The blood donation module will enable users to search for available blood donors based on blood type, location, and other relevant criteria. It will also provide a platform for users to schedule appointments with donors, track donation history, and receive notifications. Similarly, the plasma donation module will allow users to search for plasma donors, schedule appointments, and manage donation records. This module will focus on the specific requirements and processes associated with plasma donation. The system will integrate with a database management system using SQL to store and retrieve user information, donor details, appointment records, and other relevant data. The database will ensure data integrity and provide efficient data retrieval for the system's functionalities.

1. INTRODUCTION

Blood donation is harmless and safe in the body. Rather, it is a social responsibility. The donor is donating for it as it will be used in saving lives of his fellow beings. He himself may use the same during his own need. MILLIONS OF people owe their lives to people whom they will never know or meet in their lifetime. They are none other than those people, who have donated their blood

freely and without any reward – voluntary blood donors. Voluntary unpaid donors are the foundation of a safe blood supply which saves millions of human beings from the jaws of untimely death. We need to extend a hearty appreciation to these unsung heroes who give the precious gift of life to mankind JUNE 14TH IS OBSERVED AS INTERNATIONAL BLOOD DONARS DAY. Nothing is comparable to the preciousness of human blood. In spite of the rapid and remarkable conquests of medical science today, there is no laboratory that manufactures blood. It is only in human beings that human blood is made and circulated. For those who require blood for saving their lives, sharing from other fellows is the only means. Hence, donation rather voluntary donation is the only way of accumulating blood at safe storage to meet emergency requirements for saving lives his is software that can enable users communicate with machines and was created using the Code Igniter pup framework.

2.   EXISTING SYSTEM

The GUCCI framework allows for cohort-based analysis of cardiac blood flow data, enabling the derivation of normal value ranges and medical guidelines. AudiSSI is a self-sovereign identity system that allows users to manage their identities while ensuring privacy. It also provides an efficient way for service providers (SPs) to verify the qualifications of registered drivers.At the present there is no software to keep any records in blood bank. It becomes difficult to provide any record immediately at times of emergency. Required more human efforts in maintaining the branch related information. Manually to keep the accounts is also tedious & risky job & to maintain those accounts in ledgers for a long period is also very difficult. Difficult to manage and maintain the files. Chance of damage of files, if the data is stored in the files for duration of time. Privacy is difficult, Time consuming is retrieving, storing and updating the data. It is difficult to keep track the record about the donor & receiver he has donated or received the blood at the last time. Rare blood groups are not available all the time at all blood banks and recipients find difficulties to track the right blood donor. The Manual Blood donation system has many disadvantages which includes, it is too time consuming, often leads to error prone results, consumes lot of manpower, lacks donor information, retrieval of data takes a lot of time, percentage of accuracy is less.

3.   LITERATURE SURVERY

The paper "Blood Bag A Web Application To Manage All Blood Donation And Transfusion Process".This survey explores the Blood Bag web-based application that is connected to a centralized database to gather and organize the data from all blood banks and blood donation campaigns.

The paper "A Cross Platform Blood Donation Application With A Real Time Intelligent And Ratinal Recommendation System": In This study We designed a real-time, intelligent, and rational recommendation system using sentiment analysis of the user's feedback, response rate of the donor, and the current geo-location information and finally develop a cross-platform application for blood collection and distribution system.

The paper "Nearest Blood And Plasma Donor Finding: A Machine Learning Approach": This literature review focuses on the Purpose is to build a platform with clustering algorithms which will jointly help to provide the quickest solution to find blood or plasma donor.

The paper "Blood And Plasma Donation, Management System With Global Positioning System Using Firebase": This survey has developed a multi-page application that can provide the donor's information application is named DONORS QUEST, where a seeker can search for the right donor in a fraction of a second.

4.   PROPOSED SYSTEM

The online blood and plasma donation system aims to connect emergency clinic patients with suitable donors through a Java-based backend, HTML/CSS/Bootstrap frontend, and SQL database management. Our driver verification application ensures a secure and trustworthy platform for customers, drivers, and service providers. Drivers undergo police verification and comprehensive checks for legitimacy, enhancing safety and trust in the service. Customers can confidently request rides with verified drivers The proposed system (Blood Bank Management System) is designed to help the Blood Bank administrator to meet the demand of Blood by sending and/or serving the request for Blood as and when required. The proposed system gives the procedural approach of how to bridge the gap between Recipient, Donor, and Blood Banks. This Application will provide a common ground for all the three parties (i.e. Recipient, Donor, and Blood Banks) and will ensure the fulfilment of demand for Blood requested by Recipient and/or Blood Bank. The features of proposed system are ease of data entry, system should provide user friendly interfaces, no need to maintain any manual register and form, immediate data retrieval and so on.
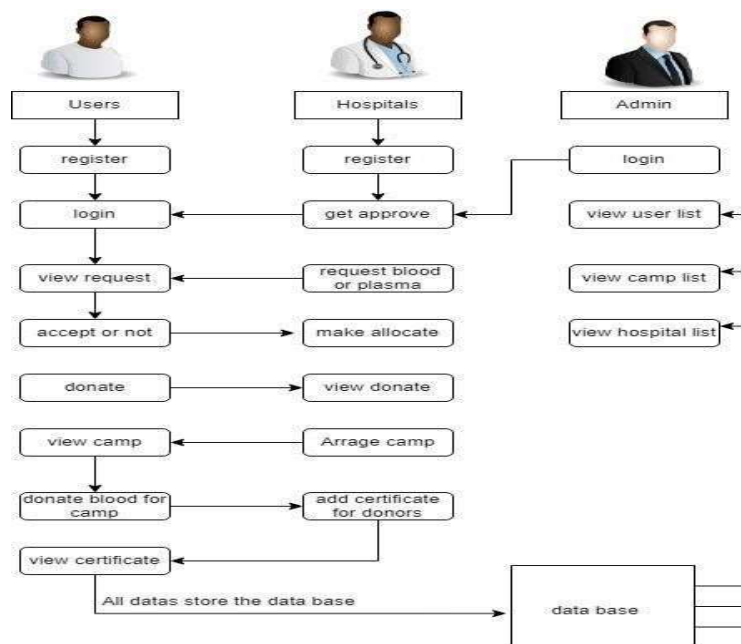

Fig.1 System Architecture Diagram

5.   METHODOLOGY

Streamline the process of finding suitable blood and plasma donors for emergency clinic patients by providing an online platform for users to connect with donors. User Registration and Authentication: Implement a secure login and registration system to allow users to create accounts, log in securely, and manage their profiles within the system. Enable users to search for available blood donors based on criteria such as blood type, location, and other relevant parameters. Provide a scheduling system for users to book appointments with donors. Allow users to track their blood donation history. Implement a notification system to keep users informed about their appointments and donation-related updates. Similar to the blood donation module, enable users to search for plasma donors based on specific criteria. Implement a scheduling system for users to manage appointments with plasma donors. Focus on the specific requirements and processes associated with plasma donation. Utilize Bootstrap for responsive design, ensuring an optimal user experience across various devices and screen sizes. Integrate the system with a SQL-based database management system to store and retrieve user information, donor details, appointment records, and other relevant data. Ensure data integrity and efficient data retrieval to support the various functionalities of the system. Enhance Accessibility: Develop an easy-to-use interface to make the system accessible to a wide range of users, including those in need of blood or plasma donations and potential donors.

Notification System: Implement a notification system to keep users informed about relevant updates, appointments, and other important information related to the donation process.

6.   ADMIN

Administrator modules make login just not register page its will see the medical clinics subtleties and client subtleties then give support for medical clinics.

Fig.2 Admin Module Diagram

7.   HOSPITALS

Emergency clinics first register and login before login they get the end ores by administrator then will be ask blood to clients and get the blood and plasma.
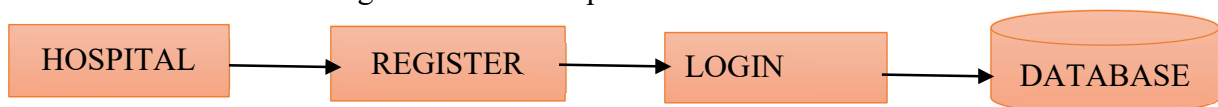

Figure.3 Hospital Module Diagram

8. USERS

clients register and login then get any solicitation mail check the application get the medical clinics data and give for what blood or plasma the they will go give.

Figure 4. Users Module Diagram

CAMP

Emergency clinic organize the any camps client get the notice mail then client will go give blood or plasma. this camp give the endorsement to benefactors
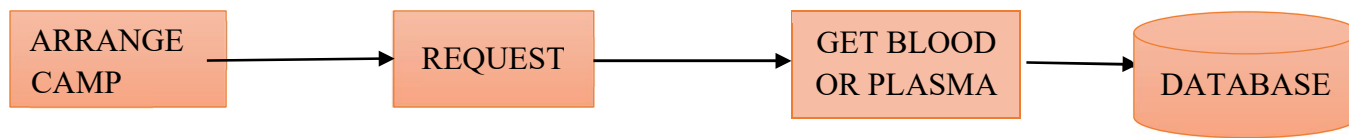

Figure 5.Camp Module Diagram

9. CERTIFICATE

client get the camp subtleties mail that camp for gather the blood and plasma assuming client give the blood or plasma can get endorsements.

EXPERIMENTAL RESULTS

In the first scenario, we measure the results of the requests sent to the create data function; with one worker being initialized in the network, the initial number of requests is 1000 per second. The number of requests is continuously sent to the system within 2 min and gradually increases to 10,000 requests per second. The measurement results are shown. We observe that the number of successfully executed requests is relatively high compared to the failed requests; most of the successful requests are above 12,000 requests per second, while the number of failed requests only ranges from 2–3 requests depicts the results and number of requests to query the data of blood records in the database. In this scenario, the number of workers increases to 10; each worker, in turn, sends 1000 requests to create 10,000 requests per second in the system. The system's data query results are still stable, in which the number of successful requests ranges from the lowest level of 37,204 to the highest 42,169 requests, while the number of failed data query requests is only from 0 to 1 request depicts the measurement results of requests that perform the data update function for blood samples. In this feature, the number of workers increased by two compared to the initial data initialization request; the number of requests is also increased from 1000 requests to 10,000 requests per second per worker. The number of successful requests increased slightly from the lowest level of 15,235 to the highest of 16,206 requests per second. However, the number

of failed requests is higher than that in scenario number one because the number of workers has increased. This means that the system takes longer when the number of users increases. It takes more time to process the received requests, and the number of failed requests increases. Finally, the latency of the data update function of the blood samples is also shown. The latency of the requests is kept stable when the number of requests increases from 1000 to 10,000 requests. However, the processing time is at the highest level compared to 2 requests to initiate and query data; this happens when the system starts querying the data and then updates the data fields that requested data and stores new ones. The maximum value of Max Latency is 795.4 s for 1000 requests; in addition, the rest of the cases are stable with a delay of over 700 s.
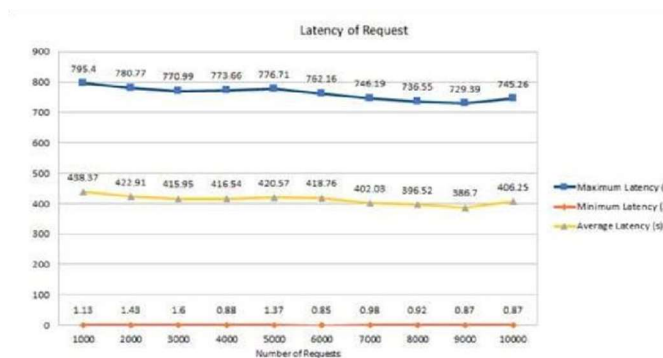
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Figure.6 Accuracy Diagram

10.   RESULT & ANALYSIS

Homepage:

Figure 7. Homepage

Admin login page:

Figure 8.Admin Login Page **User**

Request view page:

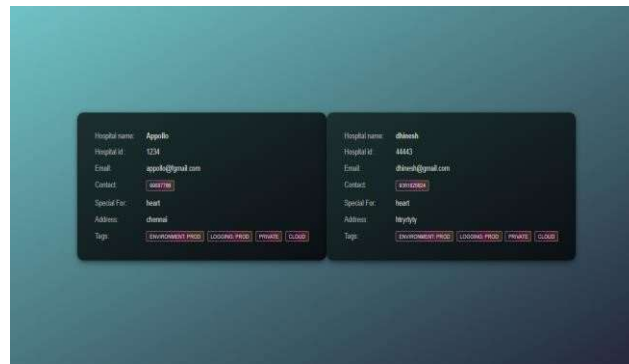Figure 9. User View Page **Hospital**

Details:

Figure 10. Hospitals Details Page **Blood**

Plasma donate page:

Figure 11. Blood Or Plasma Donate Page
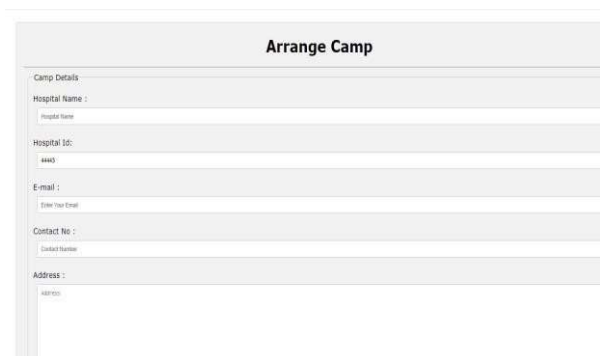
Camp Arrange page:

Figure 12. Camp Arrange Page

Certificate page:

Figure 13. Certificate Page

11.   FUTURE ENHANCEMENT

In conclusion, the proposed online blood and plasma donation system represents a comprehensive and user-friendly solution aimed at streamlining the process of connecting potential donors with patients in need. By utilizing Java for backend logic, HTML, CSS, and Bootstrap for an intuitive user interface, and SQL for robust database management, the system combines technology and healthcare to create a secure and efficient platform. The login and registration page ensures a secure entry point for users, emphasizing data privacy and system integrity. The blood and plasma donation modules cater to specific requirements associated with each donation type, offering functionalities such as search, appointment scheduling, donation history tracking, and notifications. By integrating with an SQL database, the system ensures the seamless storage and

retrieval of essential information, including user details, donor records, and appointment history. This integration not only enhances data integrity but also facilitates quick and efficient data retrieval, contributing to the overall responsiveness of the system. Implementing a real-world anonymous database system. Improving the efficiency of protocols, in terms of number of messages exchanged and in terms of their sizes, as well. Implement using two are more algorithms.

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